

CLAIMS

1. A dwelling wall comprising a structural frame of spaced apart studs and noggings disposed between an outer layer of lightweight concrete panels and an inner layer of plasterboard liner, and wherein said lightweight concrete panels are made of a concrete mix having a nominal density in the range of 500 to 1500kg/m³.
2. A dwelling wall as claimed in claim 1 wherein said lightweight concrete panels are made of a concrete mix of cement, sand, BST lightweight concrete aggregate, superplasticiser and water.
3. A dwelling wall as claimed in claim 2 wherein the proportion of said superplasticiser comprises of 0.5-1.5 % of cement by weight.
4. A dwelling wall as claimed in claim 2 wherein said water/cement ratio is 0.30– 0.35 by weight of cement.
5. A dwelling wall as claimed in claim 1 wherein at least one of said lightweight concrete panels has a polystyrene backing sheet affixed thereto.
6. A dwelling wall as claimed in claim 5 wherein said at least one of said lightweight concrete panels is about 50mm thick and said polystyrene backing sheet is about 10mm thick.
7. A dwelling wall as claimed in claim 1 wherein said at least one of said lightweight concrete panels has at least a first edge having a groove and at least a second edge having a

tongue, such it can be engaged in a tongue and groove relationship with one or more like panels.

8. A dwelling wall as claimed in claim 7 wherein a panel clip is secured to said structural frame and adapted to engage with said at least one of said lightweight concrete panels and an adjacent like panel at the junction of their respective tongue and groove relationship.

9. A dwelling wall as claimed in claim 1 wherein at least one first foil member is disposed within said structural frame between said spaced apart studs and noggings.

10. A dwelling wall as claimed in claim 9, wherein said first foil member is a concertina foil batt.

11. A dwelling wall as claimed in claim 1 wherein at least one second foil member is disposed between said layer of lightweight concrete panels and said structural frame.

12. A lightweight concrete panel for use as an outer layer of a dwelling wall, said panel being made of concrete mix of cement, sand, BST lightweight concrete aggregate, superplasticiser and water, and said concrete mix having a nominal density in the range of 500 to 1500kg/m³.

13. A lightweight concrete panel as claimed in claim 12 wherein said superplasticiser proportion comprises of 0.5-1.5 % of cement by weight.

14. A lightweight concrete panel as claimed in claim 12 wherein said water/cement ratio is 0.30– 0.35 by weight of cement.

15. A lightweight concrete panel as claimed in claim 12 wherein said panel has a backing sheet of polystyrene affixed thereto.

16. A lightweight concrete panel as claimed in claim 15 wherein said lightweight concrete panel is about 50mm thick and said polystyrene backing sheet is about 10mm thick.

17. A lightweight concrete panel as claimed in claim 12 wherein said panel has at least a first edge having a groove and at least a second edge having a tongue, such that it can be engaged in a tongue and groove relationship with one or more like panels.